

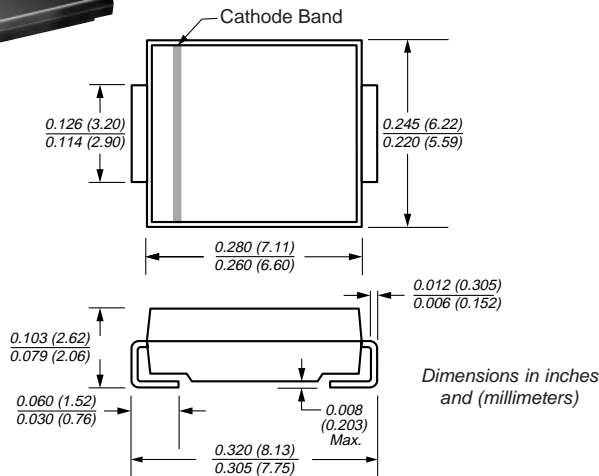


Ultrafast Rectifiers

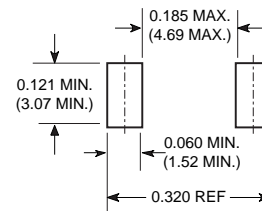
Reverse Voltage 400 to 600V
Forward Current 3.0A
Reverse Recovery Time 50ns



DO-214AB (SMC)



Mounting Pad Layout



Mechanical Data

Case: JEDEC DO-214AB molded plastic body over passivated chip

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.007oz., 0.21g

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultrafast recovery time for high efficiency
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	MURS340	MURS360	Unit
Device Marking Codes		MG	MJ	
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	V
Working peak reverse voltage	V _{RWM}	400	600	V
Maximum DC blocking voltage	V _{DC}	400	600	V
Maximum average forward rectified current at: (See figure 1)	I _{F(AV)}	3.0 4.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	125		A
Typical thermal resistance junction to ambient	R _{θJL}	11		°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175°C		°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage ⁽¹⁾	I _F = 3.0A, T _J = 25°C I _F = 4.0A, T _J = 25°C I _F = 3.0A, T _J = 150°C	V _F	1.25 1.28 1.05	V
Maximum instantaneous reverse current at rated DC blocking voltage ⁽¹⁾	T _J = 25°C T _J = 150°C	I _R	10 250	μA
Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A		t _{rr}	50	ns
Maximum reverse recovery time at, I _F =1.0A, di/dt=50A/μs, V _R =30V, I _{rr} =10% I _{RM}		t _{rr}	75	ns
Maximum forward recovery time I _F =1.0A, di/dt=100A/μs, Rec. to 1.0V		t _{fr}	25	ns

Note: (1) Pulse test: t_p = 300μs, duty cycle ≤ 2%

MURS340 thru MURS360



Vishay Semiconductors
formerly General Semiconductor

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

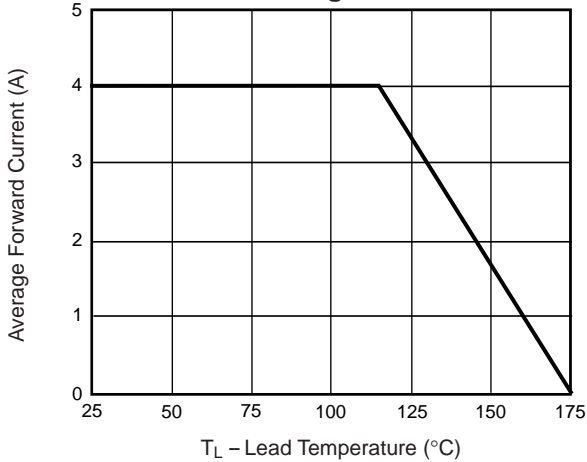


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

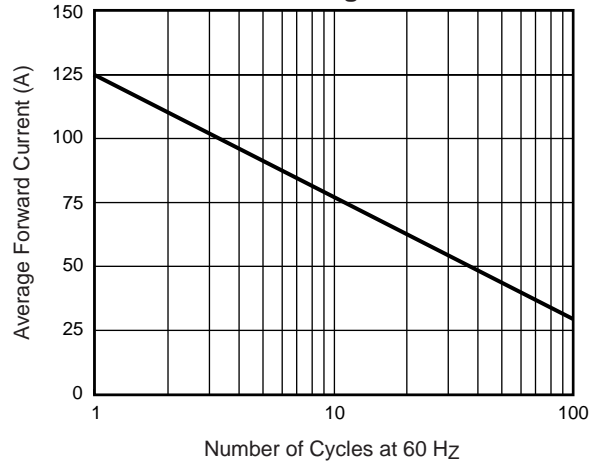


Fig. 3 – Typical Instantaneous Forward Characteristics

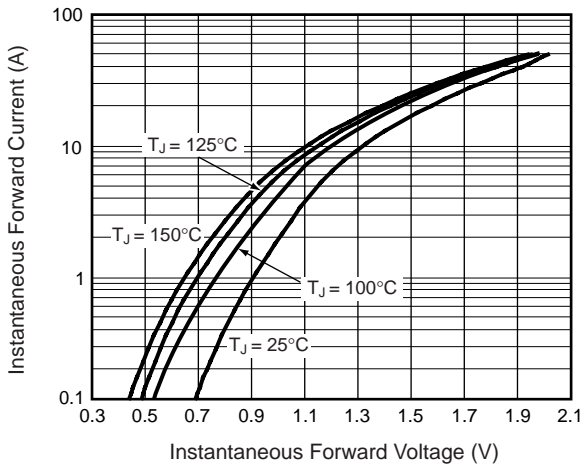


Fig. 4 – Typical Reverse Characteristics

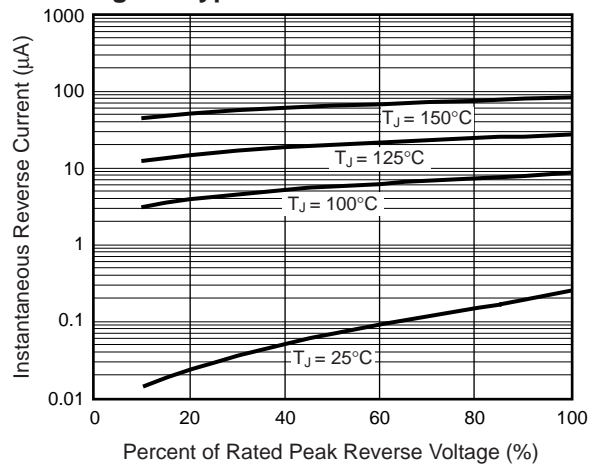


Fig. 5 – Typical Junction Capacitance

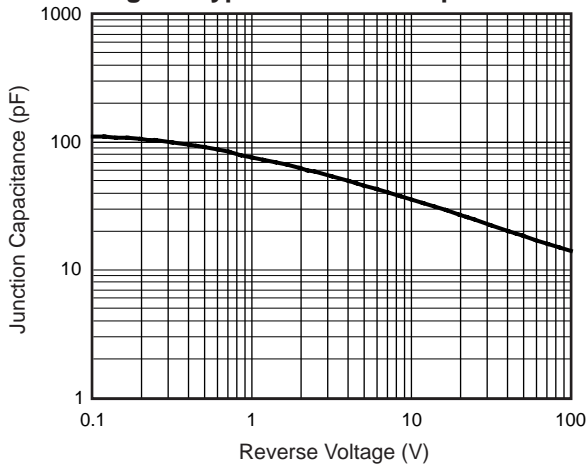


Fig. 6 – Typical Reverse Switching Characteristics

